



KCO-25E
CONVECTION OVEN
INSTALLATION — OPERATION — MAINTENANCE



BLODGETT OVEN COMPANY

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IMPORTANT

WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

The information contained in this manual is important for the proper installation, use, and maintenance of this oven. Adherence to these procedures and instructions will result in satisfactory baking results and long, trouble free service. Please read this manual carefully and retain it for future reference.

Errors: Descriptive, typographic or pictorial errors are subject to correction. Specifications are subject to change without notice.



THE REPUTATION YOU CAN COUNT ON

For over a century and a half, The Blodgett Oven Company has been building ovens and nothing but ovens. We've set the industry's quality standard for all kinds of ovens for every foodservice operation regardless of size, application or budget. In fact, no one offers more models, sizes, and oven applications than Blodgett; gas and electric, full-size, half-size, countertop and deck, convection, Cook'n Hold, Combi-Ovens and the industry's highest quality Pizza Oven line. For more information on the full line of Blodgett ovens contact your Blodgett representative.

Your Service Agency's Address:



Model:

Serial Number:

Your oven was installed by:

Your oven's installation was checked by:

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Introduction

Oven Description and Specifications

Cooking in a convection oven differs from cooking in a conventional deck or range oven since heated air is constantly recirculated over the product by a fan in an enclosed chamber. The moving air continually strips away the layer of cool air surrounding the product, quickly allowing the heat to penetrate. The result is a high quality product, cooked at a lower temperature in a shorter amount of time.

Blodgett convection ovens represent the latest advancement in energy efficiency, reliability, and ease of operation. Heat normally lost, is recirculated within the cooking chamber before being vented from the oven: resulting in substantial reductions in energy consumption and enhanced oven performance.

ELECTRICAL SPECIFICATIONS (per section)							
KW	Hz	Volts	Phase	Amps			
				L1	L2	L3	N
3.0	60	208	1	15	15	—	—
3.0	60/50	240	1	13	13	—	—
3.0	60/50	220	1	14	—	—	14
3.0	60/50	230	1	13	13	—	—
3.0	60/50	200	1	15	—	—	15
3.0	60/50	240	1	13	—	—	13

NOTE: Load ratings are double the above data for double stacked units.



Oven Components

Heating Elements – located on the back wall of the oven, the elements provide heat to the baking chamber on electric ovens.

Control Panel – contains wiring and components to control the oven operation.

Oven Racks – three racks are provided standard.

Rack Supports – hold oven racks.

Blower Wheel Cover – located on the back interior wall of the oven. Protects the blower wheel.

Blower Wheel – spins to circulate hot air in the baking chamber.

Convection Motor – provides power to turn the blower wheel.

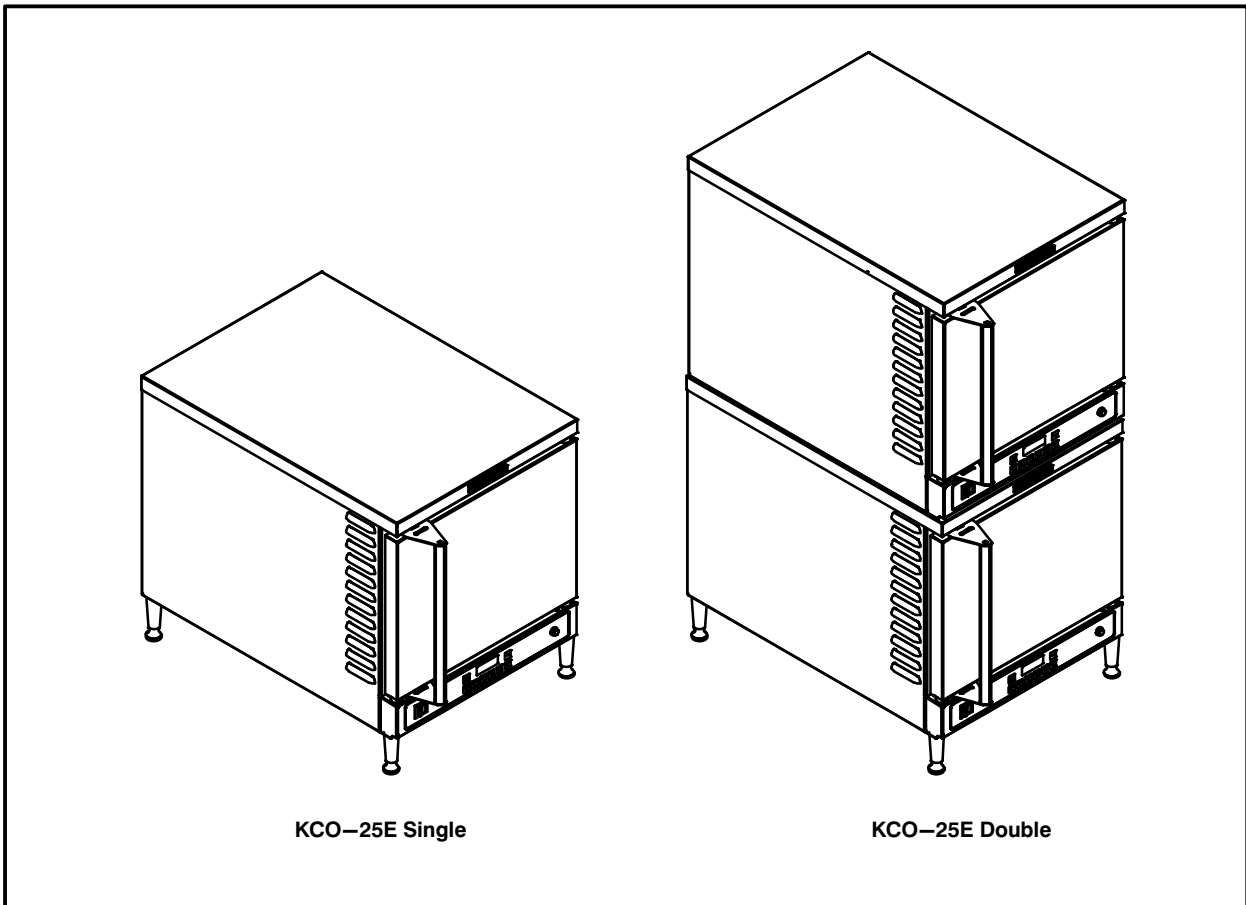


Figure 1



Installation

Delivery and Location

DELIVERY AND INSPECTION

All Blodgett ovens are shipped in containers to prevent damage. Upon delivery of your new oven:

- Inspect the shipping container for external damage. Any evidence of damage should be noted on the delivery receipt which must be signed by the driver.
- Uncrate the oven and check for internal damage. Carriers will accept claims for concealed damage if notified within fifteen days of delivery and the shipping container is retained for inspection.

The Blodgett Oven Company cannot assume responsibility for loss or damage suffered in transit. The carrier assumed full responsibility for delivery in good order when the shipment was accepted. We are, however, prepared to assist you if filing a claim is necessary.

OVEN LOCATION

The well planned and proper placement of your oven will result in long term operator convenience and satisfactory performance.

- Place the oven in an area which is accessible for proper operation and servicing.
- It is also essential that ventilation air not be obstructed in any way if proper operation is to be assured. Tripping of the blower motor thermal overload protective device is caused by excessive ambient temperature in the motor compartment resulting from insufficient ventilation. Such a condition must be corrected immediately if permanent damage to the oven is to be avoided.

Before making any utility connections to this oven, check the rating plate attached to the back of the oven to be sure the oven specifications are compatible with the electrical services supplied for the oven.



Oven Assembly

LEG ATTACHMENT

NOTE: Before operating the KCO-25E, the unit must be mounted on the legs provided.

1. Tilt the oven onto its back.
2. Screw 4" legs into four holes located near oven corners.
3. Use a tool to tighten the hex nut at the top of each leg.
4. Lift oven forward onto legs.

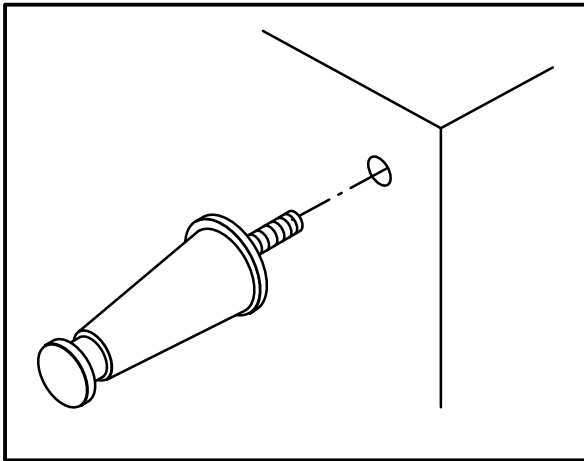


Figure 2

OVEN LEVELING

After the oven is mounted on the legs it should be leveled by screwing the adjustable leg feet in or out as necessary. Check with a spirit level placed on the top of the oven.

DOUBLE STACKING

1. Mount the lower section on legs as directed.
2. Set the upper section on the lower section.
3. Remove the two stacking straps from the bottom unit.
4. Remove the bottom left and right screws from the upper section.
5. Re-attach the two stacking straps with the screws removed in Steps 3 and 4.

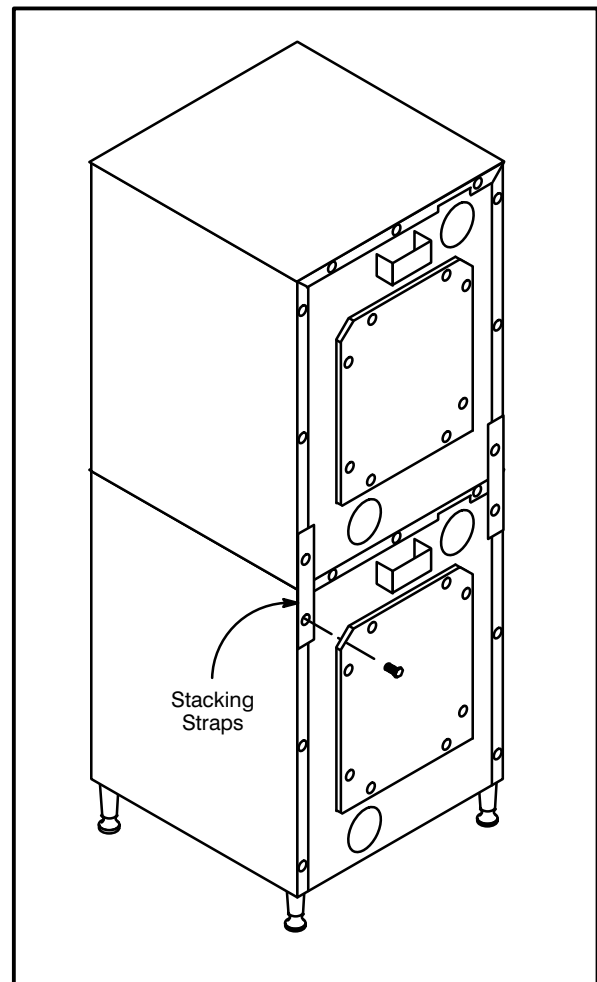


Figure 3



Installation

Oven Assembly

DOOR RELOCATION

The KCO-25E is shipped with the door hinged on the right side. If left hand operation is necessary use the following procedure to relocate the door.

1. Shut off the oven power switch.
2. Remove the door as follows:
 - a.) Loosen the two upper door bolts.
 - b.) Loosen the two lower door bolts. Remove the top bolt.
 - c.) Slide the remaining lower door bolt up in its slotted hole.

NOTE: The lower door pin attached to the bolt will release from the bushing in the unit frame.

- d.) Tilt the door (with the 5/16" thick washer) away from the unit.
 - e.) Lower the door so that the upper door pin drops out of the bushing in the unit frame.

3. Relocate the hinge and catch parts as follows:
 - a.) Remove the trim plates located on the frame opposite the door pins. The two plates are attached with one screw each.

NOTE: This will expose the pin/bushing holes for the alternate door location.

- b.) Move the two brass door bushings in the unit frame to the alternate door pin/bushing holes.
 - c.) Attach the trim plates to the frame over the two holes where the bushings were. Mounting holes are provided at the new locations.

NOTE: Note that the upper trim plate has a slotted air opening.

- d.) Move the door catch plate located on the upper door frame to the opposite side of the oven cavity. Mounting holes are provided at the new location for the catch plate (two screws).

4. Reattach the door as follows:
 - a.) Attach the door to the unit at the relocated bushings by reversing the steps above.
 - b.) Tighten the four door bolts hand tight only.

5. Relocate the handle and plate assembly on the door as follows:
 - a.) Remove the four hex head screws which attach the handle plates to the door.
 - b.) Twist the upper plate around the door handle by at least 90°.
 - c.) Lower the handle and plate assembly out of the door.
 - d.) Flip the handle and plate assembly 180°.
 - e.) Reattach the assembly by inserting the roller latch plate into the opening at the door top.
 - f.) Twist the lower plate around the door handle to its original mounting position.
 - g.) Reinstall the four screws through the handle plate into the door.
6. Adjust the door as follows:
 - a.) Close the door and check that the roller latch secures the door tightly.
 - b.) Adjust the catch plate (by its slotted mounting holes) if necessary.
7. Turn the unit on and verify that the door proximity switch shuts off the fan when the door opens.

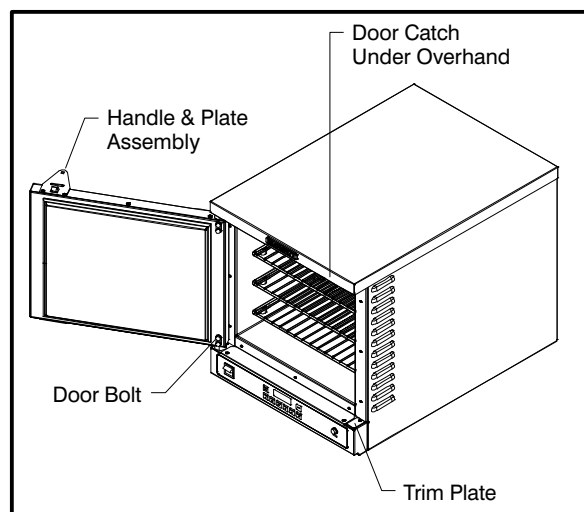


Figure 4



THE INSTALLATION INSTRUCTIONS CONTAINED HEREIN ARE FOR THE USE OF QUALIFIED INSTALLATION AND SERVICE PERSONNEL ONLY. INSTALLATION OR SERVICE BY OTHER THAN QUALIFIED PERSONNEL MAY RESULT IN DAMAGE TO THE OVEN AND/OR INJURY TO THE OPERATOR.

Qualified installation personnel are individuals, a firm, a corporation, or a company which either in person or through a representative are engaged in, and responsible for:

- the installation of electrical wiring from the electric meter, main control box or service outlet to the electric appliance.

Qualified installation personnel must be experienced in such work, familiar with all precautions required, and have complied with all requirements of state or local authorities having jurisdiction.

U.S. and Canadian installations

All ovens, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the *National Electrical Code, ANSI/NFPA 70—Latest Edition* and/or *Canadian National Electric Code C22.2* as applicable.

The ventilation of this oven should be in accordance with local codes. In the absence of local codes, refer to the National ventilation code titled, "*Standard for the Installation of Equipment for the Removal of Smoke and Grease Laden Vapors from Commercial Cooking Equipment*", NFPA-96-Latest Edition.

General export installations

Installation must conform with Local and National installation standards. Local installation codes and/or requirements may vary. If you have any questions regarding the proper installation and/or operation of your Blodgett oven, please contact your local distributor. If you do not have a local distributor, please call the Blodgett Oven Company at 0011-802-860-3700.

ELECTRICAL CONNECTION

U.S and Canadian installations

This unit is supplied with a power cord and 6-20P NEMA plug (3 prong grounding 250 volt). It is intended for use with a 6-20R NEMA receptacle.



WARNING!!

This appliance is equipped with three prong grounding type plug for your protection against shock hazard and should be plugged directly into a properly grounded three prong receptacle. DO NOT cut or remove the grounding prong from this plug.

General export installations

Before making any utility connections to this oven, check the rating plate attached to the back of the oven to be sure the voltage, phase and KW rating are compatible with the electrical services supplied for the oven. See the table on page 2 for electrical specifications.

THE BLODGETT OVEN COMPANY CANNOT ASSUME RESPONSIBILITY FOR LOSS OR DAMAGE SUFFERED AS A RESULT OF IMPROPER INSTALLATION.





Operation

Safety Information and Operating Tips

THE INFORMATION CONTAINED IN THIS SECTION IS PROVIDED FOR THE USE OF QUALIFIED OPERATING PERSONNEL. QUALIFIED OPERATING PERSONNEL ARE THOSE WHO HAVE CAREFULLY READ THE INFORMATION CONTAINED IN THIS MANUAL, ARE FAMILIAR WITH THE FUNCTIONS OF THE OVEN AND/OR HAVE HAD PREVIOUS EXPERIENCE WITH THE OPERATION OF THE EQUIPMENT DESCRIBED. ADHERENCE TO THE PROCEDURES RECOMMENDED HEREIN WILL ASSURE THE ACHIEVEMENT OF OPTIMUM PERFORMANCE AND LONG, TROUBLE-FREE SERVICE.

Please take the time to read the following safety and operating instructions. They are the key to the successful operation of your Blodgett conveyor oven.



SAFETY TIPS

For your safety read before operating

- DO NOT remove the control panel cover unless the oven is unplugged.

OPERATING TIPS

Oven Temperature

Follow the Time and Temperature recommendations provided for the product to be prepared in the oven. Cooking at higher temperatures will not reduce cooking time, it will produce unsatisfactory results.

Pans and Racks

Product or pan height determines how many racks are used. The oven holds up to three 9" x 13" racks.

Never place a pan or aluminum foil on the bottom of the oven. This obstructs the flow of air and results in uneven baking and roasting.

Baking

Weigh the product to ensure equal distribution in each pan. Varying amounts of product will cause uneven baking results.

Solid State Digital Control

OVEN CONTROLS

1. POWER ON/OFF - controls the operation of the oven. When lit the power to the unit is on. If the switch is not lit, the power to the unit is off.
2. DISPLAY - displays time, temperature and other information related to oven function. Time is displayed in minutes and seconds and counts down.
3. START/STOP KEY - starts or stops the selected product key program.
4. PRODUCT KEYS (1-6) - associates a time and temperature with a specific product for each key.
5. PROGRAM KEY - accesses the program mode to set or change the time or temperature of a product key.
6. HEAT LIGHT - indicates that the elements are operating.

DISPLAY MESSAGES

- idLE** Indicates the oven is heating to, or cycling at the idle temperature. (Temperature the oven maintains when not in use).
- H i** Indicates the oven temperature is too high for the selected product recipe. Wait until **Prd i** is displayed.
- Lo i** Indicates the oven temperature is too low for the selected product recipe. Wait until **Prd i** is displayed.
- Prd i** Indicates the oven has reached the selected recipe temperature. Ready for product load.
- i Pan** Indicates the number of pans of the same product in one load.
- done i** Indicates the timer has counted down to 00:00 and the product is done.
- codE** Indicates the control is ready to accept the code and enter the program mode.
- Prog** Indicates the control has entered the program mode.
- tE i** Indicates the cook temperature for a product key can be programmed.
- t1 i** Indicates the cook time for a single pan can be programmed.
- t2 i** Indicates the cook time for two pans can be programmed.
- t3 i** Indicates the cook time for three pans can be programmed.
- Prob** Indicates an open or shorted probe.

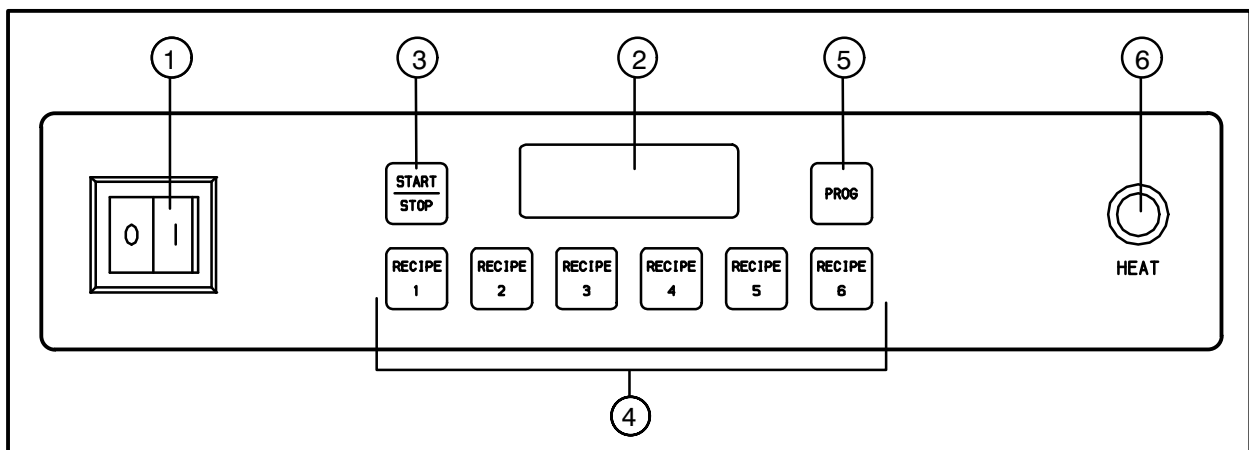


Figure 5



Operation

Solid State Digital Control

OVEN OPERATION

NOTE: The display examples given below are for product 1.

1. Toggle the POWER SWITCH (1) to the ON position. The display reads **dLE** as the oven heats to, or cycles at the programmed idle temperature.
2. Select one of the six (6) programmed PRODUCT KEYS (4). Press the key once if one pan of the product is to be loaded. The display reads **1 P2n**. Press twice if two pans of the product are to be loaded. The display reads **2 P2n**. Press three times if three pans of the product are to be loaded. The display reads **3 P2n**.

The display flashes **H 1** and **1 P2n** if the current oven temperature is greater than the programmed temperature for the selected product key. The display flashes **L2 1** and **1 P2n** if the current oven temperature is lower than the programmed temperature for the selected product key. When the display flashes **Prd 1** and **1 P2n** the unit is at the programmed temperature.

3. If the wrong product is selected repeat Step 2 using the correct PRODUCT KEY (4). If the product choice is correct but the number of pans is wrong; press the appropriate PRODUCT KEY (4) until the display reads the correct number of pans.
4. When both the product selection and number of pans are correct, and the display flashes **Prd 1** and **1 P2n**; load the product into the oven. Close the door.
5. Press the START/STOP key (3) to begin the product countdown. The display flashes as the time counts down.
6. The display flashes **donE 1** and the buzzer sounds when the product has timed out.
7. Press the START/STOP key (3) to turn off the buzzer.
8. Remove the product.

PRODUCT PROGRAMMING

NOTE: The example given below is for Product 1.

To enter the Program Mode:

1. Press and hold the PROGRAM key (5) for 3 seconds. The buzzer sounds and the display reads **codE**.

NOTE: If the program key is pressed and NOT held the controller displays the current oven temperature and the program mode will not be accessed.

2. When the display reads **codE** use the PRODUCT KEYS (4) to enter the program mode access code. The access code is: 1 1 1 1
3. Press the PROGRAM key (5). The display reads **Prd9**.

To program a selected Product Key:

1. Press the desired PRODUCT key (4). The control flashes **tE 1** (number of selected product key) then displays the current cook temperature.

The new cook temperature may now be entered.

To enter numeric data use product key 5 to increase the value and product key 6 to decrease the value. If the key is pushed quickly the units will increase/decrease by one. If the key is held, the units will increase/decrease by one to the nearest ten. The units will then increase/decrease by ten.

When the desired temperature is reached press the PROGRAM key (5) to save the new temperature.

2. The control flashes **t 1** then displays the current time for a single pan of product. The new cook time may now be entered in minutes and seconds. When the desired time is reached press the PROGRAM key (5) to save the new time.
3. The control flashes **t2 1** then displays the current time for two pans of product. The new cook time may now be entered in minutes and seconds. When the desired time is reached press the PROGRAM key (5) to save the new time.

Solid State Digital Control

4. The control flashes **t3** then displays the current time for three pans of product. The new cook time may now be entered in minutes and seconds. When the desired time is reached press the PROGRAM key (5) to save the new time.
5. All items for the selected product key have now been programmed. The display reads **Prdg**.

NOTE: Another product key may be programmed at this time by repeating Steps 1-4.

To exit the Program Mode:

1. After the last product key has been programmed, press the PROGRAM key (5) to exit the program mode. The display reads **idle**.

PRESET PROGRAMMING

The product keys have been preprogrammed at the factory as follows:

Recipe	Temp.	Time
1	300°F	10:00
2	325°F	10:00
3	350°F	10:00
4	375°F	10:00
5	400°F	10:00
6	425°F	10:00



Operation

Suggested Times and Temperatures

PRODUCT	FAHRN.	CELCIUS	TIME	# SHELVES
MEATS				
Beef				
Hamburger Patties (5 per lb)	400°F	205°C	8-10 mins.	3
Banquet Shell Steaks (10 oz.)	450°F	235°C	7-8 mins.	3
Top Sirloin (6-7 lbs.)	300°F	150°C	2 hrs	1
Pork, Lamb & Bacon				
Baked Stuffed Pork Chops	375°F	190°C	25-30 mins.	2
Lamb Chops (small loin)	400°F	205°C	7-8 mins.	3
Bacon (on racks in 1/4 size sheet pans)	400°F	205°C	5-7 mins.	3
POULTRY				
Chicken Breast & Thigh	350°F	175°C	40 mins.	3
Chicken Back & Wing	350°F	175°C	35 mins.	3
Chicken (1½ lbs. quartered)	350°F	175°C	30 mins.	2
FISH & SEAFOOD				
Fish Sticks	335°F	170°C	16-18 mins.	3
Halibut Steaks, Cod Fish (frozen 5 oz)	350°F	175°C	20 mins.	3
Lobster Tails (frozen)	425°F	220°C	9 mins.	2
CHEESE				
Macaroni & Cheese Casserole	350°F	175°C	30 mins.	3
Lasagna (Frozen)	300°F	150°C	2½ hrs	2
Melted Cheese Sandwiches	400°F	205°C	8 mins.	3
POTATOES				
Idaho Potatoes (120 ct.)	400°F	205°C	50 mins.	3
Oven Roasted Potatoes (sliced or diced)	325°F	165°C	10 mins.	3
BAKED GOODS				
Fruit Pies & Turnovers				
Fruit Berry Pies (22 oz)	325°F	165°C	35 mins.	3
Frozen Fruit Pies (46 oz.)	325°F	165°C	45-50 mins.	3
Fresh Apple Pie (30 oz.)	350°F	175°C	25-30 mins.	3
Pumpkin Pies	300°F	150°C	30-50 mins.	3
Bread & Rolls				
Bread (1 lb. loaves)	325°F	165°C	30 mins.	2 loaves
Southern Corn Bread	375°F	190°C	15-20 mins.	3
Brown & Serve Rolls	350°F	175°C	15 mins.	3
Cakes & Cookies				
Sheet Cakes (1¼ – 1½)	325°F	165°C	16-18 mins.	3
Chocolate Cake	325°F	165°C	20 mins.	3
Brownies	325°F	165°C	15 mins.	3

NOTE: Actual times and temperatures may vary considerably from those shown above. They are affected by weight of load, temperature of the product, recipe, type of pan and calibration of thermostat. Should your recipe vary, write in your proven time and temperature for ready reference.



Cleaning and Preventative Maintenance

CLEANING THE OVEN

Stainless steel ovens may be kept clean and in good condition with a light oil.

1. Saturate a cloth, and wipe the oven when it is cold.
2. Dry the oven with a clean cloth.

On the stainless front or interiors, deposits of baked on splatter may be removed with any non-toxic industrial stainless steel cleaner. Heat tint and heavy discoloration may be removed with any non-toxic commercial oven cleaner.

1. Apply cleaners when the oven is cold. Always rub with the grain of the metal.

Cleaning interior parts

1. Remove the racks from the oven.
2. Soak the racks in a solution of ammonia and water.
3. Reinstall after cleaning.

PREVENTATIVE MAINTENANCE

The best preventative maintenance measures are, the proper installation of the equipment and a program for routinely cleaning the ovens.

If maintenance or repairs are required, contact your local Blodgett service company, a factory representative or the Blodgett Oven company.



WARNING!!

Always disconnect the appliance from the power supply before servicing or cleaning.



Maintenance

Troubleshooting Guide

POSSIBLE CAUSE(S)	SUGGESTED REMEDY
SYMPTOM: Blower motor not running	
<ul style="list-style-type: none">• No power to oven• Door is open• Door switch malfunction• Motor burned out	<ul style="list-style-type: none">• Press POWER ON/OFF key• Close the door• *• *
SYMPTOM: Controller displays <i>PROB</i>	
<ul style="list-style-type: none">• Short or open temperature probe• Loose probe connections at controller or thermostat• Internal problem with controller	<ul style="list-style-type: none">• *• *• *
SYMPTOM: Motor is running: No Heat	
<ul style="list-style-type: none">• Loose wire between element and relay• Element burned out• Element relay malfunction• Malfunction in controller or thermostat• Hi limit thermal switch opened	<ul style="list-style-type: none">• *• *• *• *• *
SYMPTOM: Oven on – Control not working	
<ul style="list-style-type: none">• Computer controller not properly installed• Internal problem with computer controller• Thermostat malfunction	<ul style="list-style-type: none">• Reinstall• *• *
SYMPTOM: Baking Problems – Product too light or dark	
<ul style="list-style-type: none">• Oven calibration• Cook temperature or time not correct for the product• Initial raw product temperature not consistent for programmed product time and temperature	<ul style="list-style-type: none">• *• Adjust the controller recipe program• Adjust the initial product temperature to meet standards
<small>*Denotes remedy is a difficult operation and should be performed by qualified personnel only. It is recommended, however, that All repairs and/or adjustments be done by your local Blodgett service agency and not by the owner/operator. Blodgett cannot assume responsibility for damage as a result of servicing done by unqualified personnel.</small>	



WARNING!!

Always disconnect the power supply before cleaning or servicing the oven.

**CUSTOMER
INSERT
WIRING DIAGRAM
HERE**